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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,069	07/16/2003	William F. Sauber	DC-05242	1256
33438 7590 08/22/2007 HAMILTON & TERRILE, LLP P.O. BOX 203518 AUSTIN, TX 78720			EXAMINER CHEN, ALAN S	
			ART UNIT 2182	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/621,069

Applicant(s)

SAUBER, WILLIAM F.

Examiner

Alan S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 07/03/2007 have been fully considered but they are not persuasive.
2. Applicant argues the switch in the prior art reference to Northcutt (*Fig. 10, element 71*) receives the output of the Audio Codec (*Fig. 10, element 84*) and not from the PCI express interface.

Examiner disagrees based a difference in the interpretation of the given claim language. The limitation under contention appear to be last one in the independent claims, namely "a PCI Express switch...operable to switch visual information from the PCI Express interface to the graphics controller and audio information from the PCI Express interface to the audio processing components.". Under the broadest reasonable interpretation of this claim language, the switch simply appears to be able to switch between visual information and audio information (*per last limitation of claim 1, "...operable to switch visual information...and audio information"*). Northcutt performs this switching precisely as shown in Fig. 10. Switch, element 71, switches between the Audio Codec, element 84, and the graphics controller, element 10. The "visual information" is obtained via PCI Express bus interface (*Fig. 10, AGP/PCI Express*) to the graphics controller (*Fig. 10, element 82, Graphics Accelerator*). The "audio information" is from the audio in, which can be from the same PCI based bus (*Fig. 15, shows PCI bus interfacing graphics card*) to Audio Codec (*Fig. 10, element 84*), the Audio Codec comprising the audio processing components as claimed.

3. Applicant next argues Northcut switching analog information rather than PCI formatted information.

Examiner points out, at least for the independent claims, the data coming into the graphics card shown in Fig. 10, is over an PCI Express interface at the initial input stage. This data at a further stage, serves as the input to the switch, element 84. This suffices to read on the claim language.

4. Because to the similarity between claims 1-8 and 9-21, Examiner felt it was unnecessary to parse out the rejection for claims 9-21 in the previous Office Action. However, it has been done so in this Office Action for clarity purposes.

5. Examiner's rejection is maintained and reiterated below.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1,3,5,6,8,9,11,13,14,16,17,19,20,21 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat. Pub. No. 2005/0144468 to Northcutt et al. (*Northcutt, previously cited*).

8. Per claim 1, Northcutt discloses an information handling system (*Fig. 5*) comprising: information processing components configured to output audio and visual

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information (*Fig. 5 shows system having various components used for both audio and video*) to a PCI Express interface (*Fig. 10 indicates system having PCI Express bus*); a graphics card (*Fig. 5, element 20 and Fig. 10, element 80*) having a PCI Express interface (*Fig. 10, AGP/PCI Express bus clearly shown*) in communication with the audio and visual information output by the information processing components (*Fig. 10, the graphics card clearly interfaces both audio and video*) and an audiovisual appliance interface (*Fig. 10, elements 52 shows interface to appliance, element 2*) operable to output audiovisual information to an audiovisual appliance (*Figs. 2 and 5, element 2 are TV and audio equipment*); a graphics controller (*Fig. 10, element 82*) coupled to the graphics card (*controller is on the graphics card*) and operable to process visual information of the information processing components for output to the audiovisual appliance interface (*graphics accelerator processes visuals faster and for output to TV*); audio processing components coupled to the graphics card (*Fig. 10, element 84, audio codec resides on the card*) and operable to process audio information of the information processing components for output to the audiovisual appliance interface; a PCI Express switch coupled to the graphics card (*Fig. 10, element 71; Paragraph 148, expressly states that "one input of switch 71 receives audio data...A second input of switch 71 receives video data"*), the PCI Express switch disposed between the PCI Express interface, the graphics controller and the audio processing components (*Fig. 10, element 71, the switch is attached between PCI Express bus, graphics controller and audio codec*), and operable to switch visual information from the PCI Express interface to the graphics controller (*graphics controller getting visual data from PCI Express*

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*Interface is switched to audio by the switch, element 71) PCI Express and audio information from the PCI Express interface to the audio processing components (audio codec getting audio data is switched to video by the switch, element 71; 'audio in' can be received via PCI based bus, Fig. 15).*

9. Per claim 9, Northcutt discloses a method for processing audio information through a PCI Express graphics card (*Fig. 10, elements 80 is graphics card with PCI based bus interface; Audio Codec, element 84 processes audio information*), the method comprising: generating audiovisual information at an information processing system (*Fig. 5, system generates audio/video information for graphics card*); communicating the audiovisual information to a PCI Express interface of the PCI Express graphics card (*Fig. 10, PCI Express bus clearly shown, Audio In can also be from a PCI based bus*); switching the audiovisual information with a PCI Express switch (*Fig. 10, element 71 is a switch for input from data that was received at some stage via PCI Express bus*) so that the audio information is communicated to audio processing components (*Fig. 10, audio input is output HDMI devices for output, the HDMI devices constituting part of the audio processing components*) and the video information is communicated to video processing components (*Fig. 10, video input is output to HDMI devices for output, the HDMI devices constituting part of the video processing components*); processing the audio and visual information with the audio and video components (*Fig. 10, Audio Codec and Graphics Accelerator constitute part of the audio and video components*) to output an audiovisual appliance signal (*Output of switch, element 71, is audio/video signal*).

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10. Per claim 17, Northcutt discloses a PCI Express graphics card (*Fig. 10 is a graphics card*) comprising: a PCI Express interface (*Fig. 10, PCI Express bus clearly shown; Audio In also from PCI based bus*) operable to accept audio and visual information communicated in PCI Express format (*data operating over PCI bus is in PCI format*); a PCI Express switch (*Fig. 10, element 71*) in communication with the PCI Express interface (*Switch receives data that came over PCI Express bus interface at some stage*) and operable to switch audio information to audio processing components and video information to video processing components (*switch switches between audio and video inputs*); audio processing components (*Fig. 10, Audio Codec, element 84 and HDMI sound devices*) in communication with the PCI Express switch (*Fig. 10, element 71*) and operable to process the audio information to output an audiovisual appliance signal (*output of switch, element 71, is audio/video signal to appliance*); video processing components (*Fig. 10, Graphics Accelerator, element 82 and HDMI video devices*) and in communication with the PCI Express switch (*Fig. 10, element 71*) and operable to process the video information to output an audiovisual appliance signal (*output of switch, element 71, is audio/video signal to appliance*); and an audiovisual interface in communication with the audio processing components and the video processing components and operable to communicate the audiovisual appliance signal to an audiovisual appliance (*Fig. 10, element 52 HDMI transmitter handles both audio/video for output to appliance*).

11. Per claims 3,11 and 19, Northcutt discloses claims 1,9 and 17, respectively, further disclosing the audio processing components comprise an audio controller

operable to accept the audio information from the PCI Express switch and output to the audiovisual appliance interface (*Fig. 10, element 84*).

12. Per claims 5,6,8 and 13,14,16, Northcutt disclose claims 1 and 9, respectively, Northcutt further disclosing use of HDMI (*Fig. 10, element 52, HDMI*), HDTV (*Paragraph 8*) and IEEE 1394 (*Paragraph 217*) as interface components.

13. Per claims 20 and 21, Northcutt discloses claim 17, Northcutt further discloses having a single connector for audio and video (*Fig. 4, HDMI is goes over a single connector*) as well as separating out the audio and video over different connectors (*Fig. 5*).

#### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2, 10 and 18 are rejected under 35 USC 103(a) as being unpatentable over Northcutt in view of US Pat. Pub. No. 2006/0259642 to Du et al. (*Du, previously cited*).

Northcutt discloses claims 1, 9 and 17. Northcutt further discloses a CODEC (*Fig. 10, element 84*) operable to accept audio information (*Audio In*) and output to the audiovisual appliance interface (*output to multiplexer switch and subsequently HDMI, element 52*);



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Northcutt does not disclose expressly an AC97 interface in accepting audio information.

Du discloses AC97 interface being a well-known and standard interface in accepting audio information for a CODEC (*Paragraph 48 and Fig. 3, element 42*).

Northcutt and Du are analogous art because they are from the same field of endeavor in receiving audio information via a codec.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an AC97 controller interface.

The suggestion/motivation for doing so would have been using standards in the audio interface industry to maximize interoperability leverage manufacturing efficiencies of a widely used part.

16. Claims 4,7,12,15 are rejected under 35 USC 103(a) as being unpatentable over Northcutt.

Northcutt discloses claims 1 and 9. Northcutt further discloses the audiovisual interface capable of being a variety of different standards not limited to just HDMI (*Paragraph 95*).

Northcutt does not disclose expressly use of the EVC or coaxial cable output.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to utilize EVC and coaxial cable outputs.

The suggestion/motivation for doing so would have been utilize standards well-known and widely used in the marketplace to allow the individual user to have simpler

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setup of a audiovisual system as opposed to complicated setups given by esoteric output standards.

***Conclusion***

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC  
08/10/2007

*Alan E. Gu*  
8/10/07